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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,870	04/19/2005	Tanel Tenson	010315-224	5979

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BUCHANAN, INGERSOLL & ROONEY PC
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EXAMINER

VOGEL, NANCY TREPTOW

ART UNIT	PAPER NUMBER
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1636

NOTIFICATION DATE	DELIVERY MODE
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04/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No. 10/531,870	Applicant(s) TENSON ET AL.	
	Examiner NANCY VOGEL	Art Unit 1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25,28-32,34-43 and 46-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37-42 is/are allowed.
- 6) ☒ Claim(s) 25,28-32,34-36,43 and 46-48 is/are rejected.
- 7) ☒ Claim(s) 49-52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/10/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 25, 28-32, 34-43, 46-52 are pending in the case.

Receipt of the Information Disclosure Statement on 3/10/08 is acknowledged.

Any rejection of record in the previous action not addressed in this office action is withdrawn. There are no new grounds of rejection that were not necessitated by applicants' amendment and therefore, this action is final.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25, 28-32, 34-36, 43, 46-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The rejection is based on the Guidelines for the Examination of Patent Applications under the 35 U.S.C. 112, first paragraph "Written Description published in the Federal Register (Volume 66, Number 4, Pages 1099-1111). The claims are drawn to a selection system comprising a bacterial cell deficient of araD gene into which a vector carrying an araD gene has been added; a vector comprising a mutated araD

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gene; a method of selecting cells transformed with a plasmid containing an araD gene; dependent claims also recite that the araD gene is mutated. Claims 25, 28-32, 34-36, 43 and 46-48 are genus claims in terms of a selection system using, a vector comprising, or method of selecting cells transformed with a plasmid containing: any gene encoding L-ribulose-5-phosphate 4 epimerase, or any mutated araD gene, or any araD gene, from any organism. The claims encompass a broad class of vectors, systems or methods that comprise or use any araD gene or any gene encoding L-ribulose-5-phosphate-4-epimerase, which provides selective ability. While the specification provides general information on the araD gene encoding L-ribulose-5-phosphate-4-epimerase of E. coli, there is no disclosure of the precise amino acids which are necessary for catalytic activity and which are conserved among different organisms. Furthermore, although the specification discloses a mutated araD gene from E. coli that has a stop codon at codon 8, that functions to encode enough araD encoded protein to allow growth of a cell having a deletion of the araD gene, (which is proposed to be the result of read-through of the stop codon in sufficient amounts to produce the araD protein for growth on arabinose), there is no disclosure of any other mutation events in the araD gene which have the same effect, or araD genes from other organisms which when mutated to produce a stop codon, would have the same effect. The disclosure is not deemed to be descriptive of the complete structure of a representative number of species encompassed by the claims as one of skill in the art cannot envision all the encompassed catalytic active araD proteins based on the teachings of the specification. It is noted that in order to provide a selective marker,

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enough functional araD encoded protein must be produced or expressed in order to complement the deletion or elimination of functional araD encoded protein provided by the host cell. Furthermore, it is noted that the araD may be from any organism, and therefore the recitation of "position 8" may be occur at different structural regions in different araD molecules, and may not result in a functional polypeptide when expressed. Therefore, the specification does not described the claimed selection system, vector and method using said vector, in such full, clear, concise and exact terms so as to indicate that Applicant had possession of the method at the time of filing the present application. Thus, the written description requirement has not been satisfied.

This rejection is maintained essentially for the reasons made of record, in slightly modified formed as necessitated by applicant's amendments to the claims. Applicant's arguments filed 9/4/07 have been considered but have not been found convincing.

Applicants have argued that regarding the broad recitation of araD (not specifying the origin), "the araD gene is involved in the pentose pathway of both prokaryotic and eukaryotic organisms", and further makes citation to several references which applicant argues shows numerous reference describing L-ribulose-5-phosphate 4-epimerase coding sequences, which are said to be submitted herewith. However, these references were not received, and appear to be limited to several bacterial species. However, the claims are not so limited, and it is noted that araD genes from organisms other than that disclosed in the specification, with a stop mutation at codon 8 may not encode an active fragment, and therefore the rejection is maintained.

Claims 49-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 37-42 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NANCY VOGEL whose telephone number is (571)272-0780. The examiner can normally be reached on 7:00 - 3:30, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach can be reached on (571) 272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NANCY VOGEL/
Primary Examiner, Art Unit 1636

NV
3/30/08

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